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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09893362
Filing Date: 25 June 2001
Appellant(s): SHUSTER ET AL.

MAILED

JUL 17 2007

GROUP 3600

Jonathan Jaech, Esq.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 23 March 2007 appealing from the Office action mailed 24 May 2006.

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(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

Hamzy et al., US006636247B1, 21 October 2003;

Net-mercial.com: "Net-mercial.com partners with GEO Interactive to deliver dynamic audio/Video Internet advertising solutions", PR Newswire, p. 2239, 18 August 1999;

Admitted as prior art that ""multimedia content on the Internet is becoming more prevalent" (rejection para. 6);

Official notice taken (rejection para. 13 and 14);

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Barry, Lance Leonard, "Teaching A Way is Not Teaching Away", *JPTOS*, December 1997: 867-882.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims. This is a verbatim copy of the final rejection mailed on 24 May 2006.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed with an amendment on 21 February 2006 have been fully considered but they are not persuasive. The arguments are addressed by revision of the last rejection and explicitly at para. 7 and 8 below.

Priority

2. The examiner confirms that this application has benefit of provisional applications No. 60213396 and 60213827 under 35 U.S.C. 119(e). An objection to the priority claim was raised in the last Office action (mailed on 21 November 2005). Applicant's reply (2nd para. on p. 7) adequately addressed that objection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being obvious over Hamzy et al. (US006636247B1) in view of Net-mercial.com (PR Newswire, 18 August 1999).
5. Hamzy et al. teaches (independent claims 1 and 17) a method and system for providing advertising in a computer network, the method comprising: receiving a request from at least one user for delivery of a user-selected Web page associated with a Web site, and

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selecting at least one advertisement for delivery to said at least one user in conjunction with said user-selected Web page (*an advertisement associated with that web page*, col. 2 lines 12-15), said advertisement being selected from a plurality of advertisements (col. 4 lines 41-44); and delivering said at least one advertisement in a format that precludes said at least one user from bypassing any portion of said ad (col. 2 lines 25-30).

6. Hamzy et al. does not teach playback of an audio ad. Net-mercial.com teaches playback of an audio ad (end of the second para., marked reference "A"). Because Net-mercial.com is referred to by Hamzy et al. (front page, under *OTHER PUBLICATIONS*), because multimedia ads attract customers, and because applicant discloses that multimedia content is becoming more prevalent (para. [0007] of the published application, US 20020022999A1), it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add the teachings of Net-mercial.com to those of Hamzy et al.
7. Applicant argues (pp. 7-8) that Hamzy et al. fails to teach "playback". The rejection states that playback is taught by Net-mercial.com, not by Hamzy et al. Applicant argues further that Hamzy et al. is concerned with a different problem. Hamzy et al. teaches several options at col. 2 lines 10-30. The cited option, at col. col. 2 lines 25-30, reads on the claimed invention.
8. Applicant also argues (p. 8, 2nd para.) that Net-mercial.com teaches away from the instant invention by "giving the consumer complete control of the ad". Net-mercial.com teaches several options at the top of p. 2/2, marked reference "B". For most of these options, including the first (*A timer informs the user that the ad is only temporary ...*), Net-mercial.com does not teach "giving the consumer complete control of the ad".
9. Hamzy et al. also teaches claims 2, 3, 18 and 19 (col. 6 lines 38-50, where *a series of buttons* reads on a plurality of input devices).
10. Claims 5 and 21 are admitted prior art (para. [0006] of the [published application]).
11. Net-mercial.com also teaches claims 13-16 and 29-32.
12. Neither reference teaches claims 6, 7, 22 and 23. However, they are obvious common commercial practice because ordinary money reads on "credits".

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13. Neither reference teaches claims 4, 8-12, 20 and 24-28. These were common practices at the time of the instant invention. (Claims 8-12 and 24-28 describe ad targeting.) It is obvious to use common practices. Official notice of these common knowledge or well known in the art statements was taken in the last Office action (mailed on 21 November 2005, para. 13). These statements are taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. (MPEP 2144.03.C.)
14. Neither reference teaches claim 33. Official notice is taken (MPEP § 2144.03) that pop-up were common at the time of the instant invention. It is obvious to use common practices).

(10) Response to Argument

It is helpful to first review how the teachings of two references have been combined to reject both independent claims 1 and 17:

- Hamzy et al. teaches every element of the claims except one, playback of an audio ad (para. 5 and 6 above). In particular, Hamzy does teach delivering an ad in a format that precludes the user from bypassing the ad (Hamzy, col. 2 lines 25-30).
- Net-mercial.com teaches playback of (delivering) an audio ad (para. 6 above).
- It would have been obvious for a PHOSITA to add the teachings of Net-mercial.com to those of Hamzy et al. because: (a) multimedia ads attract customers, (b) "multimedia content on the Internet is becoming more prevalent" (p. 2, lines 21-22 of the instant spec.) and (c) Net-mercial.com is cited on the front page of Hamzy et al.

Appellant argues that the references do not teach or suggest all of the claimed limitations of claims 16 and 17 (p. 6). In particular, appellant argues,

"Although Net-mercial discloses providing audio/visual ads, Net-mercial fails to disclose or suggest:

delivering said at least one audio advertisement to said at least one user via said network in a format that precludes said at least one user from bypassing playback of any portion of said audio advertisement" (bottom of p. 6)

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This is a weak straw man. The rejection never says that Net-mercial.com has these properties. As noted above, Hamzy teaches delivering an ad in a format that precludes the user from bypassing the ad (Hamzy, col. 2 lines 25-30), while Net-mercial.com teaches delivering an audio ad.

Appellant argues that Net-mercial.com teaches away from delivering an ad in a format that precludes the user from bypassing the ad (bypass preclusion, pp. 7 and 8). First, it would have to be a very strong teaching away, because bypass preclusion is the focus of Hamzy:

"The present invention addresses a problem prevalent in electronic information distribution systems. In particular, 'on line' users often bypass advertisements by hitting a specific button or a control sequence such as Alt-F4 to bypass an advertisement. Most advertisers would like to extend the time period that their advertisement is before the viewing audience. Some companies offer free email or even Internet access in exchange for viewing advertisements. It is important that the viewer cannot easily tune out or ignore the ads. It would be easy for viewers to ignore banner or scrolling ticker tape advertisements. The present invention addresses this concern." (Hamzy, col. 1 line 64 to col. 2 line 8, emphasis added)

"A further control function according to the invention is to display the advertisement which is correlated to the particular web page for a predetermined time period before transferring the window containing the content or web page the user has selected." (Hamzy, col. 2 lines 25-30, emphasis added)

Second, Net-mercial.com includes the following statement, which the examiner interprets as a teaching of a bypass preclusion option:

"A timer informs the user that the ad is only temporary and will expire after a certain number of seconds or when the web site loads." (top of p. 2/2)

Appellant has cited other parts of Net-mercial.com to vitiate this teaching, but this is a simple statement that is best taken for its plain meaning. This single sentence alone gives two preclusion options (preclusion during loading or "after a certain number of seconds"). The examiner suggests that other statements interpreted by the appellant as a "teaching away" are in fact either alternatives or irrelevant.

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Third, Barry¹ has reviewed and analyzed the extensive legal history of the "teaching away" doctrine, and it does not support the appellant's argument. Barry notes that a teaching away may be done "expressly" (as a warning) or "impliedly", when "a modification or combination would render inoperable the invention disclosed in the reference" (p. 872, bottom two lines). In the instant case the alleged teaching away is neither done "expressly" nor "impliedly". It is not a teaching away.

Barry notes that "Teaching Another Way" (p. 878 *et seq.*) is not a teaching away, but a teaching of alternatives, some of which might appear to be more desirable than others, but all viable options nonetheless. The examiner believes that Net-mercial.com is offering preclusion alternatives, including no preclusion at all.

Barry quotes a textbook and the CAFC (at pp. 867 and 869) in reducing the theory of teaching away to one word: discouragement. A teaching away discourages one of ordinary skill in the art from following the suggested teaching.

The U.S. Supreme Court has ruled that 35 USC 103(a) and the *Graham v. Deere* "TSM" test should be applied and judged with "common sense".² Common sense suggests that there is nothing in Net-mercial.com that would discourage one of ordinary skill in the art from adding its teaching of delivering an audio ad to the teachings of Hamzy et al., without abandoning the strong teaching of bypass preclusion in Hamzy et al.

¹ Barry, Lance Leonard, "Teaching A Way is Not Teaching Away", *JPTOS*, December 1997: 867-882, provided as an appendix to this examiner's answer.

² "It is common sense that familiar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle.", *KSR INTERNATIONAL CO. v. TELEFLEX INC. et al.*, 550 U.S. ____ (2007).

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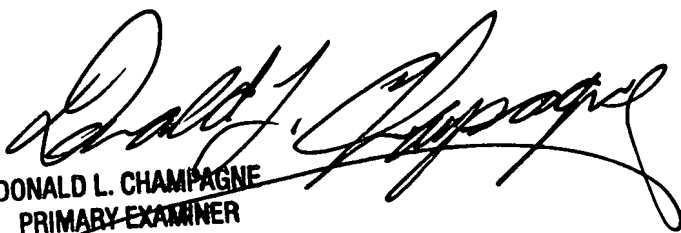
(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


Donald L. Champagne
Primary Examiner
Art Unit 3622


DONALD L. CHAMPAGNE
PRIMARY EXAMINER

26 June 2007

Conferees:

James W. Myhre 

Eric W. Stamber 

APPENDIX

Barry, Lance Leonard, "Teaching A Way is Not Teaching Away",

JPTOS, December 1997: 867-882

UPOV News

ACCESSION OF ECUADOR TO THE INTERNATIONAL CONVENTION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

The Government of Ecuador deposited its instrument of accession to the 1978 Act of the International Convention for the Protection of New Varieties of Plants on July 8, 1997. When the accession entered into force on August 8, 1997, the number of member States of the International Union for the Protection of New Varieties of Plants (UPOV) became 33. The States are the following:

Argentina, Australia, Austria, Belgium, Canada, Chile, Colombia, Czech Republic, Denmark, Ecuador, Finland, France, Germany, Hungary, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Paraguay, Poland, Portugal, Slovakia, South Africa, Spain, Sweden, Switzerland, United Kingdom, United States of America, Ukraine, Uruguay.

UPOV is an intergovernmental organization which cooperates in administrative matters with the World Intellectual Property Organization (WIPO) and has its headquarters in the WIPO building in Geneva, Switzerland.

The purpose of the International Convention for the Protection of New Varieties of Plants is to recognize and to ensure an intellectual property right to the breeder of a new plant variety. The member States of UPOV grant such a right in accordance with the provisions of the Convention, under their national legislation. To be eligible for protection, varieties have to belong to one of the botanical genera or species on the national list of those eligible for protection (where there is a limited list), be distinct from commonly known varieties and be sufficiently homogeneous and stable. Protected varieties remain available for use as a source of variation for the development of other varieties.

Teaching A Way Is Not Teaching Away*

Lance Leonard Barry**

When faced with an obviousness rejection of a claim in a patent application, patent attorneys and agents commonly respond by arguing that one or more of the prior art references of record "teaches away": from a modification or combination relied on to reject the claim.¹ In effect they are arguing that the references would have discouraged one of ordinary skill in the art from making the modification or combination.² The "teaching away argument"³ is also a common response when the presumed validity⁴ of a patent is under attack in litigation.⁵ As such, it is imperative that patent attorneys, agents, and examiners understand what the courts have taught about the concept of teaching away.

* © 1997, All Rights Reserved, Lance Leonard Barry, Esq. The opinions expressed herein are solely the author's and do not necessarily represent the opinions of the United States Patent and Trademark Office (PTO). The author thanks Robert A. Weinhardt, a Primary Examiner in the PTO's Electrical Cluster, for sharing some thoughts on teaching away and William Watkins, Esq., a Primary Examiner in the PTO's Group 1300, for reviewing a draft of this article.

** The author is an attorney licensed by the Virginia State Bar and working as an Electrical Engineering Primary Examiner in the Electrical Cluster of the PTO. He also lectures on obviousness at the PTO's Patent Academy. The author earned a J.D. degree from the George Mason University School of Law, an M.S. degree in electrical engineering from Johns Hopkins University, and a B.E.E. degree in electrical engineering from The Catholic University of America. Before joining the PTO, he was a Senior (Electrical) Engineer with Booz & Allen & Hamilton.

1 Robert W. Harris, *Apparent Federal Circuit Standards for Weighing Nonobviousness Argument that Prior Art Reference Teaches Away from Present Invention*, 70 J. PAT. OFF. SOC'Y 79, 79 (1988). See, e.g., 1 PATENT PRACTICE 5-36 (PRI 1992) (instructing attorneys and agents that "[i]t is now, in everyday practice, unnecessary to submit rebuttal evidence when the reference used to reject the claim teaches away from the limitation. . . ."); DAVID PRESSMAN, PATENT IT YOURSELF 13-22 (5th ed. 1996) (advising inventors to consider arguing that references teach away).

2 Cf. PETER D. ROSENBERG, PATENT LAW FUNDAMENTALS § 15.06[2] (2d ed. 1995) ("Prior art theignor, of which would discourage doing what the claims do—i.e., teaching away from the claims. . . ." (emphasis added)).

3 Cf. Harris, *supra* note 1, at 98 (employing the expression "teach away arguments").

4 See 35 U.S.C. § 282.

5 E.g., *Dow Chem. Co. v. United States*, 20 Cl. Ct. 623, 630, 18 USPQ2d 1657, 1662 (Cl. Ct. 1990) ("Plaintiff suggests that this is a . . . 'teaching away' from the invention. . . .").

Dec 1997 JPTOS

Such an understanding will help us *inter alia* to recognize instances of teaching away and to distinguish them from three related notions. To emphasize the closeness of the notions to each other and to teaching away,⁶ this article labels the notions with the homonymous expressions "teaching a wasteful way," "not teaching a way," and "teaching another way." Teaching a wasteful way refers to the fact that a modification or combination would have been expensive to make. Not teaching a way refers to the fact that a reference lacks a claimed feature. Teaching another way refers to the fact that a reference teaches a better, a preferred, or an alternative way to a claimed way of accomplishing something.

This article aims to increase understanding in three parts. Part I defines the concept of teaching away. Part II explains how references teach away. Part III distinguishes the notions of teaching a wasteful way, not teaching a way, and teaching another way.

I. DEFINING TEACHING AWAY

Section 103 of Title 35 of the United States Code denies a patent for inventions that are "obvious." In *Graham v. John Deere Co.*⁸ the United States Supreme Court set forth a number of factual inquiries for deciding the obviousness of inventions under § 103.⁹ Among these inquiries is determining "the scope and content of the prior art. . . ."¹⁰ In determining the scope and content of the prior art, references must be

⁶ The closeness may be a reason for what one commentator termed the lack of "clearly articulated specific standards useful for evaluating the validity and strength" of teaching away arguments in particular cases. Harris, *supra* note 1, at 79-80.

⁷ The full text of 35 U.S.C. § 103(a), with emphasis added, follows.

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

⁸ 383 U.S. 1, 148 USPQ 459 (1966).

⁹ The Court expressed the inquiries as follows.

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved need, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.

Id. at 17-18, 148 USPQ at 467.

¹⁰ *Id.* at 17, 148 USPQ at 467.

read in their entirety, i.e., "as a whole."¹¹ The references must be considered for all they disclose, disclosures that teach away from an invention as well as those that point toward it.¹²

The United States Court of Appeals for the Federal Circuit (Federal Circuit) has stated that a reference will teach away from an invention when "it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant."¹³ Upon reading such a reference, explained the court, a person of ordinary skill in the art "would [have been] discouraged from following the path set out in the reference, or would [have been] led in a direction divergent from the path taken by the applicant."¹⁴ In short, teaching away is the "antithesis" of suggesting that a person of ordinary skill in the art proceed in the direction taken by an applicant.¹⁵

Although the fact that a reference teaches away is "a significant factor to be considered in determining obviousness,"¹⁶ the Federal Circuit has refused to adopt a *per se* rule that a reference that teaches away cannot serve to create a *prima facie* case of obviousness in all factual circumstances.¹⁷ This is because the degree of teaching away depends

¹¹ *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987); *Akzo N.V. v. U.S. Int'l Trade Comm'n*, 808 F.2d 1471, 1481, 1 USPQ2d 1241, 1246 (Fed. Cir. 1986).

¹² *Panduit Corp.*, 810 F.2d at 1568, 1 USPQ2d at 1597; *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 296, 227 USPQ 657, 666 (Fed. Cir. 1985). See also *Akzo N.V.*, 808 F.2d at 1481, 1 USPQ2d at 1246 ("consideration must be given where the references diverge and teach away from the claimed invention."); *W. L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 1550, 220 USPQ 303, 311 (Fed. Cir. 1983) (district court erred in disregarding disclosures in the references that "diverge from and teach away from the invention at hand"); *American Standard v. Pfizer*, 722 F.Supp. 86, 127, 14 USPQ2d 1673, 1707 (D. Del. 1989) ("disclosures in the references that 'teach away' from the claimed invention cannot be disregarded").

¹³ *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994).

¹⁴ *Id.*, 31 USPQ2d at 1131. See also *United States v. Adams*, 383 U.S. 39, 52, 148 USPQ 479, 484 (1966) ("known disadvantages in old devices would naturally discourage the search for new devices [and] may be taken into account in determining obviousness"); *Gillette Co. v. S.C. Johnson & Son*, 919 F.2d 720, 724, 16 USPQ2d 1923, 1927 (Fed. Cir. 1990) (concluding that the closest prior art "would likely discourage the art worker from attempting the substitution suggested by [the appellant]" (emphasis in original)); *ROSENBERG, supra* note 2, at § 15.06[2] ("Prior art the tenor of which would discourage doing what the claims do—i.e., teaching away from the claims . . .").

¹⁵ *PATENT PRACTICE, supra* note 1, at 5-36.

¹⁶ *Gurley*, 27 F.3d at 553, 31 USPQ2d at 1131. See also *Harris, supra* note 1, at 79 ("the case law of the Federal Circuit clearly recognizes a teach away effect as a pro-non-obviousness factor . . ."); *ROSENBERG, supra* note 2, at § 15.06[2] ("teaching away from the claims, militates against their obviousness." (emphasis added)).

¹⁷ *Gurley*, 27 F.3d at 553, 31 USPQ2d at 1131. See, e.g., *In re Farrenkopf*, 713 F.2d 714, 718, 219 USPQ 1, 4 (Fed. Cir. 1983) (finding claims obvious despite the primary reference's teaching that "the use of inhibitors . . . may be a potential source of error. . .").

on the facts of each case. The nature of the teaching, furthermore, is relevant and must be weighed in considering obviousness.¹⁸

II. WAYS OF TEACHING AWAY

Because the degree of teaching away depends on the facts of each case and the nature of the teaching is relevant,¹⁹ there are a variety of ways that a reference can teach away. This article groups them into two categories, viz., "teaching away expressly" and "teaching away impliedly."²⁰ The categories will be addressed *seriatim*.²¹

A. Teaching Away Expressly

A reference may teach away by warning expressly that an element of a claimed invention "should not, or cannot be used"²² with the prior art. In *Dow Chem. Co. v. American Cyanamid Co.*,²³ for example, a reference disclosed that an element was ineffective for a patentee's purpose.²⁴ *Dow Chemical* concerned the validity of claims specifying a chemical conversion process using copper (Cu) as a catalyst.²⁵ More specifically, the process employed a copper catalyst to convert an olefinic nitrile²⁶ having three-to-six carbon atoms to its corresponding amide.²⁷

¹⁸ Gurley, 27 F.3d at 553, 31 USPQ2d at 1131. See also *In re Young*, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) ("When prior art contains apparently conflicting references, the Board must weigh each reference for its power to suggest solutions to an artisan of ordinary skill."); *In re Merck*, 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986) ("Thus, Petersen must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole.");

¹⁹ *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994).

²⁰ Cf. PRESSMAN, *supra* note 1, at 13/22 (describing references as teaching away "expressly or by implication....");

²¹ There is room for reasonable minds to disagree over whether a particular reference teaches away expressly or inherently or both. The focus of this article, however, is on whether or not a reference teaches away not on whether it teaches away expressly or impliedly. The article employs the categories (viz., expressly, impliedly) for convenience only.

²² *Para-Ordinance Mfg. v. SGS Importers Int'l*, 73 F.3d 1085, 1090, 37 USPQ2d 1237, 1241 (Fed. Cir. 1995). The reference in this case was found not to teach away. See discussion *infra* Part III.B.

²³ 816 F.2d 617, 2 USPQ2d 1350 (Fed. Cir. 1987).

²⁴ *Id.* at 622, 2 USPQ2d at 1354.

²⁵ A catalyst is a substance that changes the velocity of a chemical reaction while remaining apparently unaffected throughout the reaction. VAN NOSTRAND'S SCIENTIFIC ENCYCLOPEDIA 447 (5th ed. 1976).

²⁶ A nitrile is a derivative of NH₂ in which there is a replacement of the three H atoms by an alkyl group. *Id.* at 113.

²⁷ 816 F.2d at 617, 2 USPQ2d at 1350. An amide is a compound that contains CO-NH₂ radical or an acid radical(s) substituted for one or more of the hydrogen atoms of an ammonia molecule. VAN NOSTRAND'S SCIENTIFIC ENCYCLOPEDIA, *supra* note 25, at 112.

A patent to Greene²⁸ disclosed a catalyst composed of the combination of cuprous salts alone or in combination with copper. Greene further disclosed that the catalyst would convert a wide range of nitriles to their corresponding amides including olefinic nitriles of three-to-six carbon atoms.²⁹ The patent included the following disclosure.

Thus, it is only necessary to have present as catalyst initially cuprous salts alone or a combination of metallic copper and a water soluble cupric salt in the instant process. It is also contemplated that combinations of metallic copper and cuprous salts, cuprous salts and cupric salts as well as metallic copper, cuprous salts and cupric salts can be used to advantage in the instant process. Stated differently, suitable catalytic combinations include Cu + Cu⁺, Cu + Cu⁺⁺, Cu⁺ + Cu⁺⁺ and Cu + Cu⁺ + Cu⁺⁺, etc. *We have found that metallic copper when used alone is ineffective in this process.*³⁰

The Federal Circuit construed Greene as teaching that copper alone was not an effective catalyst for converting a nitrile to its corresponding amide. The court concluded, accordingly, that the patent taught away from the claimed invention's use of copper metal as a catalyst.³¹

In *In re Nielson*³² a reference taught away expressly by disclosing that a claimed element was undesirable because it would affect adversely the prior art.³³ *Nielson* involved the patenting of claims specifying a method for removing pollutants from a gas as it flowed through a pipeline. The method involved cooling carbon dioxide so that it turned into snow in the pipeline and then using the snow to entrain pollutants therein.³⁴

A patent to Tassoney³⁵ taught the separating of a mixture of gases into component gases. Tassoney included the following disclosure.

In current processes wherein carbon dioxide is condensed from a stream of mixed gases by cooling, ice and solid carbon dioxide particles deposit on the surfaces and reduce the effectiveness of heat transfer. Furthermore, these solids clog passageways and restrict the flow of fluid therein. Also any moving parts, such as valves, may be rendered inoperative. Furthermore, they are also limited with respect to the amount of carbon dioxide that can be separated from the feedstream as they do not operate above 57 atmospheres.³⁶

²⁸ U.S. Patent No. 3,381,034 (Apr. 30, 1968) reissued as Re. 28,525 (Aug. 19, 1975).

²⁹ 816 F.2d at 622, 2 USPQ2d at 1354.

³⁰ Re. 28,525 at col. 1, l. 67 to col. 2, l. 9 (emphasis added).

³¹ 816 F.2d at 622, 2 USPQ2d at 1354.

³² 816 F.2d 1567, 2 USPQ2d 1525 (Fed. Cir. 1987).

³³ *Id.* at 1571, 2 USPQ2d at 1528.

³⁴ *Id.* at 1571-72, 2 USPQ 2d at 1528.

³⁵ U.S. Patent No. 3,614,872 (Oct. 26, 1971).

³⁶ *Id.* at col. 2, ll. 3-9.

The Federal Circuit concluded that the statements that "solid carbon dioxide particles deposit on the surface and reduce the effectiveness of heat transfer" and that the carbon dioxide particles "clog passageways and restrict the flow of fluid therein" taught away from the invention's formation of solid carbon dioxide and its use to entrap pollutants.³⁷

*In re Fine*³⁸ provides another example of teaching away expressly by disclosing that the presence of a claimed element is undesirable. *Fine* involved the patenting of claims specifying a system for detecting and measuring minute quantities of nitrogen compounds. Claims directed thereto had been rejected as obvious over a patent to Eads³⁹ in view of another to Warnick.⁴⁰ Eads disclosed a method for separating, identifying, and quantitatively monitoring sulfur compounds. Warnick disclosed a process for detecting the quantity of pollutants in the atmosphere. The process produced continuous readouts of the total amount of nitric oxide present in a sample gaseous mixture. The PTO had rejected the claims on the basis that it would have been obvious to substitute the nitric oxide detector of Warnick for the sulfur dioxide detector in the method of Eads.⁴¹

On appeal, the Federal Circuit reversed the rejection as failing to establish a *prima facie* case of obviousness. The court noted that, instead of Eads suggesting that its method be used to detect nitrogen compounds, Eads deliberately sought to avoid them. More specifically, Eads disclosed that the presence of nitrogen was undesirable because the concentration of the titration cell components in its sulfur detector was adversely affected by substantial amounts of nitrogen compounds in the sample. In short, Eads warned against rather than taught the claimed invention.⁴²

B. Teaching Away Impliedly

A teaching away does not have to be express; it may be implied. A reference teaches away impliedly when a modification or combination would render inoperable the invention disclosed in the reference.

³⁷ 816 F.2d at 1571-72, 2 USPQ 2d at 1528.

³⁸ 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

³⁹ U.S. Patent No. 3,650,696 (Mar. 21, 1972).

⁴⁰ U.S. Patent No. 3,746,513 (July 17, 1973).

⁴¹ 837 F.2d at 1072-73, 2 USPQ2d at 1597-98.

⁴² *Id.* at 1074, 2 USPQ2d at 1598-99. See also *In re Ehrlich*, 590 F.2d 902, 908, 200 USPQ 504, 509 (CCPA 1979) (finding that the teachings of two prior art references that high particle loadings "have a deleterious effect on the mechanical properties of the compositions and are to be avoided," taught away from an applicant's use of particles with a high volume loading).

The modification proposed in *In re Gordon*,⁴³ for example, would have left one of the references "inoperable for its intended purpose."⁴⁴ *Gordon* involved the patenting of claims specifying an assembly for filtering blood during surgery. The inlet and outlet for the blood were both located at the bottom end of the assembly with a gas vent located at the top.⁴⁵

A patent to French⁴⁶ disclosed a liquid strainer for removing dirt and water from gasoline. The inlet and outlet for the gasoline were both located at the top of the strainer. A stopcock was located at the bottom for removing collected dirt and water. French taught that gravity assisted in the separation of the dirt and water.⁴⁷

The PTO's Board of Appeals rejected the claims opining that it would have been obvious to turn the strainer upside down to meet the claimed invention.⁴⁸ The Federal Circuit observed, however, that if the strainer was turned upside down, the gasoline to be filtered would be trapped at the top, and the water sought to be separated would flow out of the outlet instead of the purified gasoline. Furthermore, the stopcock, which would be located at the top of the strainer after it was turned upside down, would be unable to remove dirt. Over time dirt would clog the filter of the strainer. The court concluded that these effects taught away from the Board's proposed modification and reversed its rejection.⁴⁹

*In re Spinnoble*⁵⁰ provides another examples of teaching away impliedly.⁵¹ *Spinnoble* involved the patenting of a claim directed toward a mixing vial having plural compartment and an improved center seal plug fabricated of butyl rubber.⁵² The PTO had rejected the claim as obvious over a combination of references including either a patent to Bujon⁵³ or to Lockhart⁵⁴ in view of one to Jensen.⁵⁵ Bujon and Lock-

⁴³ 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

⁴⁴ *Id.* at 902, 221 USPQ at 1127. *Gordon* "represents perhaps the archetypal case of improper modification of a prior art structure." Richard G. Berkley, *Some Practical Aspects of Amendments Practice in the Electro-Mechanical Arts*, 378 PLI/Pat. 217, 280 (1993).

⁴⁵ *Id.* at 900-01, 221 USPQ at 1126.

⁴⁶ U.S. Patent No. 1,175,948 (Mar. 21, 1916).

⁴⁷ 733 F.2d at 901-02, 221 USPQ at 1127.

⁴⁸ When turned upside down, reasoned the Board, the inlet and the outlet of the strainer would be at the bottom rather than the top. *Id.* at 902, 221 USPQ at 1127.

⁴⁹ *Id.*, 221 USPQ at 1127.

⁵⁰ 405 F.2d 578, 160 USPQ 237 (CCPA 1969).

⁵¹ *Id.* at 587, 160 USPQ at 244.

⁵² *Id.* at 579-81, 160 USPQ at 238-40.

⁵³ U.S. Patent No. 2,908,274 (Oct. 13, 1959).

⁵⁴ U.S. Patent No. 2,695,614 (Nov. 30, 1954).

⁵⁵ U.S. Patent No. 2,773,591 (Dec. 11, 1956).

hart each disclosed the specific vial shape and center plug arrangement of the claim. The use of butyl rubber as the material used for the center plug was deemed obvious in view of Jensen whose seal was constructed of butyl rubber.⁵⁶

The United States Court of Customs and Patent Appeals (CCPA)⁵⁷ disagreed. The court reasoned that butyl rubber does not slide readily against a glass surface because of its frictional properties, as evidenced by the rolling operation of Jensen's butyl rubber sealing ring. Both the operability and utility of Jensen's vessel depended upon a frictionally induced rolling action. In contradistinction, a sliding engagement was essential to the operability of the claimed center seal plug. The CCPA concluded that Jensen's center seal was incapable of serving the appellant's purposes.⁵⁸

The court further reasoned that because butyl rubber was significantly less resilient and more rigid than natural rubber, Lockhart's flanged center gate plug, if made of butyl rubber, would be difficult, if not impossible, to either seat or displace from its seat. Thus, a combination of the either Lockhart or Bujan with Jensen would produce a "seemingly inoperative device," and the references, therefore, taught away from the proposed combination.⁵⁹

Some cases employ the term "essential" to convey what seems to be the concept of teaching away impliedly. Under these cases, a modification or combination would require the omission of an element essential to the operation of a prior art invention thereby leaving the invention inoperable. *In re Duva*,⁶⁰ for example, involved the patenting of claims specifying a composition and process for depositing gold on base metal from a chemical bath. The depositing was accomplished by chemical reduction rather than by electroplating.⁶¹ The claims required that the concentration of cyanide ions in the bath be kept below a certain concentration.⁶²

⁵⁶ 405 F.2d at 584, 160 USPQ at 242.

⁵⁷ The CCPA was the forerunner of the Federal Circuit in reviewing patentability appeals from the PTO. Lance Leonard Barry, *Precedent for Ex Parte Patent Prosecution*, 78 J. PAT. & TRADE-MARK OFF. SOC'Y 841, 844-45 (1996).

⁵⁸ *Id.* at 834, 160 USPQ at 244.

⁵⁹ *Id.*, 160 USPQ at 244.

⁶⁰ 387 F.2d 402, 156 USPQ 90 (CCPA 1967).

⁶¹ *Id.* at 403, 156 USPQ at 91.

⁶² *Id.* at 403-04, 07, 156 USPQ at 91-92, 94.

A patent to Campana⁶³ disclosed a process and bath for electrodepositing a gold-palladium alloy.⁶⁴ The bath disclosed in Campana contained fourteen times as much cyanide as was necessary to make it soluble; the patent disclosed that this concentration was the "minimum allowable."⁶⁵ In view of these disclosures, the CCPA was persuaded that it would not have been obvious "to omit this essential salt or reduce its concentration."⁶⁶ The court concluded that in this respect the reference taught away from the claimed invention.⁶⁷

III. NOT TEACHING AWAY

As aforementioned, there are a number of ways that a reference can teach away. Conversely, there are a number of notions that should not be mistaken for teaching away. Among these notions are teaching a wasteful way, not teaching a way, and teaching another way. These will be addressed *seriatim*.

A. Teaching A Wasteful Way

Teaching a wasteful way refers to the fact that a modification or combination would have been expensive, and hence economically wasteful, to make. The focus of 35 U.S.C. § 103 is on the obviousness of an invention to a person of ordinary skill in the art.⁶⁸ Accordingly, the fact that a modification or combination would not have been made by businessmen for economic reasons does not mean that persons skilled in the art would not have made it because of technical reasons. Only the latter fact would be relevant in terms of teaching away.⁶⁹

Orthopedic Equip. Co. v. United States,⁷⁰ for example, involved the validity of claims specifying a system for aiding the operation of a

⁶³ U.S. Patent No. 2,719,821 (Oct. 4, 1955).

⁶⁴ 387 F.2d at 404, 156 USPQ at 92.

⁶⁵ *Id.* at 407, 156 USPQ at 94.

⁶⁶ 387 F.2d at 407, 156 USPQ at 94 (emphasis added). See also *In re Pagliaro*, 657 F.2d 1219, 1225, 210 USPQ 888, 893 (CCPA 1981) (concluding that a piece of prior art, which required that oil be removed before decaffeination, taught away from the applicant's use of oil in order to decaffeinate); *In re Noznick*, 478 F.2d 1260, 178 USPQ 43 (CCPA 1973) (concluding that a patent, which indicated that the presence of a partial ester was essential in order to reconstitute by water, taught away from applicant's process of making a spray-dried sour cream by spray drying a mixture of a coating agent and sour cream alone, without any partial ester).

⁶⁷ 387 F.2d at 407, 156 USPQ at 94.

⁶⁸ *Environmental Design, Ltd. v. Union Oil Co.*, 1713 F.2d 693, 697, 218 USPQ 865, 868-69 (Fed. Cir. 1983).

⁶⁹ *In re Farenkopf*, 713 F.2d 714, 718, 219 USPQ 1, 4 (Fed. Cir. 1983); *Orthopedic Equip. Co. v. United States*, 702 F.2d 1005, 1013, 217 USPQ 193, 200 (Fed. Cir. 1983).

⁷⁰ 702 F.2d 1005, 217 USPQ 193 (Fed. Cir. 1983).

retail store. The system made use of electrical communication techniques and automatic control features. A patent to Andrews⁷¹ describing an electrical computer disclosed many claimed features of the invention. The appellants argued that the "enormous size, cost, and complexity" of the computer in Andrews taught away from its use in a retail business, which had much simpler needs. The Federal Circuit dismissed the argument as directed toward economic feasibility rather than toward technical feasibility. Although the use of Andrews' computer did not make good economic sense, acknowledged the court, there was no technical reason not to use the reference.⁷²

In *re Farrenkopf*⁷³ provides another example of teaching a wasteful way. *Farrenkopf* involved the patentability of claims specifying stabilized Angiotensin I (AI) solutions. By way of background, data concerning hypertension (i.e., abnormally high blood pressure) in a patient can be obtained by measuring the amount of AI in his blood plasma. The process of measuring is known to as "RIA." RIA measurements had been plagued by that fact that enzymes present in AI tracers and standards break down the AI rendering measurements inaccurate unless the tracers and standards were stored at extremely low temperatures or in freeze-dried form at low temperatures.⁷⁴

An applicant had discovered that AI tracers and standards could be stored at room temperature without freeze-drying or freezing if a certain stabilizer was added to inhibit the activity of the enzymes. The applicant applied for a patent for claims directed thereto.⁷⁵

An article by Rutner⁷⁶ taught that proteins generally present in AI tracer and standards in RIA kits contain enzymes that break down the AI. To overcome this problem, Rutner suggested three possible solutions, one of which was the addition of "appropriate inhibitors." The article acknowledged that the addition of inhibitors was the most convenient of the three solutions, but did not discuss the solution further because it noted *inter alia* that "the use of inhibitors can be costly. . . ." Rutner recommended another solution.⁷⁸ The appellants argued *inter alia* that this statement taught away from the addition of

71 U.S. Patent No. 2,977,048 (Mar. 28, 1961).

72 702 F.2d at 1013, 217 USPQ at 199-200.

73 713 F.2d 714, 219 USPQ 1 (Fed. Cir. 1983).

74 *Id.* at 715-16, 219 USPQ at 2-3.

75 *Id.* 219 USPQ at 2-3.

76 Herman Rutner et al., *Pepsinase Activity of Carrier Proteins Used in Radioimmunoassays*,

15 J. NUCLEAR MED. 557 (1974).

77 713 F.2d at 716-18, 219 USPQ at 3-4.

78 *Id.* at 717, 219 USPQ at 3.

any inhibitor to AI standards and reagents.⁷⁹ The Federal Circuit dismissed the argument as relating purely to economics. Accordingly, the article could not be said to teach away from the invention.⁸⁰

B. Not Teaching A Way

Not teaching a way refers to the fact that a reference lacks a claimed feature. For the obviousness of an invention to be at issue, of course, there must be some difference between the invention and each prior art reference of record.⁸¹ It would be illogical, therefore, to conclude that a reference teaches away from employing a feature of an invention merely because it lacks that feature.⁸² Not teaching a way, in short, cannot be tantamount to teaching away.

Para-Ordinance Mfg. v. SGS Importers Int'l,⁸³ for example, involved the validity of a patent for a conversion kit for expanding the ammunition capacity of semi-automatic handguns. The kit expanded capacity by providing a widened ammunition magazine to accommodate an increased number of cartridges arranged side-by-side.⁸⁴

Claims for the kit differed from the prior art primarily in the means used to implement a mechanical transition between the handgun's widened grip portion and its narrower top portion of the kit. The claim featured "intermediate face portions which are converging."⁸⁵ A piece of prior art, the Browning Hi-Power handgun, achieved support of its ammunition magazine through a rounded frame that did not converge.⁸⁶ The Federal Circuit acknowledged that the Browning did not have a converging frame but found nothing about the handgun that warned against using the feature or taught that the feature should not or could not be used with the reference. Accordingly, the court concluded that the Browning did not teach away from using the claimed convergence.⁸⁷

In *re Borregard*⁸⁸ provides another example of not teaching a way. *Borregard* involved the patenting of claims for a dry transfer sheet used

79 *Id.* at 718, 219 USPQ at 4.

80 *Id.* 219 USPQ at 4.

81 Harris, *supra* note 1, at 96-97. See also 1 PATENT PRACTICE, *supra* note 1, at 5-1 ("From the language of §103, it is clear that §103 comes into play only when the claimed invention 'is not identically disclosed or described as set forth in section 102.'").

82 Harris, *supra* note 1, at 96-97.

83 73 F.3d 1085, 37 USPQ2d 1237 (Fed. Cir. 1995).

84 *Id.* at 1086, 37 USPQ2d at 1238.

85 *Id.* at 1087, 37 USPQ2d at 1239.

86 *Id.* at 1093, 37 USPQ2d at 1243-44.

87 *Id.* at 1090, 37 USPQ2d at 1241.

88 439 F.2d 206, 169 USPQ 240 (CCPA 1971).

to letter (i.e., affix letters to) a layout. There were a plurality of characters (e.g., alphabetic letters) on one side of the sheet, with a pressure-sensitive adhesive coating covering each of the letters. An artist used the sheet by placing the sheet over a layout, with the character side touching the layout; aligning a desired character with a specific location on the layout; and rubbing the back surface of the sheet over the desired character to transfer the character onto the layout. When rubbed, the adhesive caused the characters to adhere to the layout and peel away from the sheet.⁸⁹

A patent to Karlan⁹⁰ disclosed a dry transfer sheet. Karlan differed from the claim in that adhesive coated the entire face of the sheet rather than just the characters.⁹¹ While acknowledging that the patent did not specifically disclose the claimed arrangement of layers (i.e., the adhesive covering only the characters) the CCPA noted that the arrangement of Karlan was not "contrary" to what the applicant had claimed.⁹² The court seemed to be saying that there was nothing in the reference to indicate that the arrangement should not or could not be modified to render obvious the claimed invention. Accordingly, the CCPA concluded that the patent did not teach away from employing an adhesive that covered only the characters.⁹³

C. Teaching Another Way

Teaching another way is a broad notion. It refers to the fact that a reference teaches a preferred, a better, or an alternative way to a claimed way of accomplishing something.

All that a reference discloses must be evaluated for what it fairly teaches one of ordinary skill in the art.⁹⁴ Accordingly, preferred embodiments and disclosed examples and uses do not constitute a teaching away from less preferred or nonpreferred embodiments or a broader disclosure.⁹⁵

⁸⁹ *Id.* at 206-09, 169 USPQ at 240-42.

⁹⁰ U.S. Patent No. 3,013,917 (Dec. 19, 1961).

⁹¹ 439 F.2d at 208-09, 169 USPQ at 241-42.

⁹² *Id.* at 209, 169 USPQ at 242. Nor could the court find anything to indicate that an adhesive layer completely covering the carrier was "essential." *Id.*, 169 USPQ at 242. See *supra* Part II.B (discussing "essential" elements and the concept of teaching away).

⁹³ *Id.* at 209, 169 USPQ at 242.

⁹⁴ *In re* *Boe*, 355 F.2d 961, 964, 148 USPQ 507, 510 (CCPA 1966); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 296, 227 USPQ 657, 666 (Fed. Cir. 1985).

⁹⁵ *Merck & Co. v. Biocrast Labs.*, 874 F.2d 804, 807, 10 USPQ 2d 1843, 1846 (Fed. Cir. 1989); *In re* *Mills*, 470 F.2d 649, 650, 176 USPQ 196, 198 (CCPA 1972); *In re* *Lamberti*, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976); *In re* *Heck*, 699 F.2d 1331, 1333, 216 USPQ 1038, 1040 (Fed. Cir. 1983) ("[W]e do not consider Maybach as 'teaching away.' Its specific use was different, but the broader disclosures of that patent were made known, were useful and were legally available to appellant." (footnote omitted)).

In re *Susi*,⁹⁶ for example, involved the patenting of claims for polymers⁹⁷ stabilized against the deteriorative effects of ultraviolet light.⁹⁸ A patent to Knapp⁹⁹ disclosed the stabilization of "plastics" against the oxidative and deteriorative effects of ultraviolet light by adding an additive, which resulted in a compound very similar to that of the claim. Knapp described the resultant as a "particularly preferred" embodiment.¹⁰⁰

The patent also disclosed a compound, which was not similar to the applicant's, as its "most particularly preferred" embodiment.¹⁰¹ The appellant argued that the most particularly preferred embodiments of the reference taught away from the particularly preferred embodiment. The CCPA was not persuaded that one is significantly "taught away" from a "particularly preferred embodiment" by the suggestion that something else may be even better.¹⁰²

Prior art references, especially patents, often describe what the inventors understood to be the state of the prior art at the time of their invention.¹⁰³ Inventors, of course, generally consider their inventions to be better than and urge their inventions as replacements for the prior art.¹⁰⁴ Teaching that a prior art invention is somewhat inferior to another invention for the same use, however, does not teach away when ac-

⁹⁶ 440 F.2d 442, 169 USPQ 423 (CCPA 1971).

⁹⁷ A polymer is a complex molecule of a high molecular weight formed from a number of simpler molecules of the same of different sorts. VAN NOSTRAND'S SCIENTIFIC ENCYCLOPEDIA, *supra* note 25, at 1556.

⁹⁸ 440 F.2d 443, 169 USPQ at 424. Ultraviolet light is situated beyond the visible spectrum of light at the violet end of the spectrum. Such light has a wavelength shorter than the wavelengths of visible light and longer than those of X rays. WEBSTER'S NINTH NEW COLLEGIATE DICTIONARY 1280 (1990).

⁹⁹ U.S. Patent No. 3,244,668 (Apr. 5, 1966).

¹⁰⁰ 440 F.2d at 444, 169 USPQ at 425.

¹⁰¹ *Id.* at 446 n.3, 169 USPQ at 426 n.3 (emphasis added).

¹⁰² *Id.*, 169 USPQ at 426 n.3. See also *In re* *Mills*, 470 F.2d 649, 650-51, 176 USPQ 196, 197-98 (CCPA 1972) (concluding that a reference's examples directed to preferred polyethylene blend foams did not teach away from the use of polypropylene, which was listed as suitable); *In re* *Boe*, 355 F.2d 961, 148 USPQ 507 (CCPA 1966) (affirming an obviousness rejection based *inter alia* on the non-preferred disclosure of a reference).

¹⁰³ See U.S. PATENT AND TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE (M.P.E.P.) § 608.01 (6th ed., rev. 2, July 1996). The M.P.E.P. has been held to describe "procedures on which the public can rely." *Paltex Corp. v. Mossinghoff*, 758 F.2d 594, 606, 225 USPQ 243, 252, modified, 771 F.2d 480, 226 USPQ 985 (Fed. Cir. 1985); *In re* *Kaghan*, 387 F.2d 398, 401, 56 USPQ 130, 132 (CCPA 1967); *Ehicon v. Quigge*, 849 F.2d 1422, 1425, 7 USPQ2d 1152, 1154 (Fed. Cir. 1988); *Paperless Accounting v. Bay Area Rapid Transit System*, 804 F.2d 659, 662, 231 USPQ 649, 651 (Fed. Cir. 1986).

¹⁰⁴ *In re* *Beattie*, 974 F.2d 1309, 1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992). This understandable tendency of inventors may have been the impetus for PTO's prohibition against "derogatory remarks concerning the inventions of others." M.P.E.P., *supra* note 103, at § 608.01(r).

accompanied by a disclosure that the first offers acceptable advantages.¹⁰⁵ *In re Gurley*,¹⁰⁶ for example, involved the patenting of a material for forming circuit boards.¹⁰⁷ A reference to Yamaguchi¹⁰⁸ disclosed a material for forming circuit boards similar to the applicant's but impregnated with a polyester-imide resin instead of the applicant's epoxy resin. Yamaguchi disclosed that circuit boards impregnated with epoxy had "relatively acceptable dimensional stability" and achieved "some degree of flexibility," but were inferior to those made with his polyester-imide resins.¹⁰⁹

The Federal Circuit acknowledged that one of ordinary skill in the art, on learning from the reference that epoxy was inferior to polyester-imide resins, might be led to search beyond epoxy for improved products. The court noted, however, that Yamaguchi also taught that epoxy was usable and had been used for the applicant's purpose. Accordingly, the Federal Circuit concluded that the reference did not teach away from the claimed invention.¹¹⁰

Similarly, teaching an alternative or equivalent way to a claimed invention does not teach away from it. *In re Dunn*,¹¹¹ for example, involved the patenting of claims specifying a process for producing

¹⁰⁵ *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994).

¹⁰⁶ 27 F.3d 551, 31 USPQ2d 1130.

¹⁰⁷ A circuit board is a flat piece of insulating material on which electrical components are mounted and interconnected to form a circuit. MICROSOFT PRESS COMPUTER DICTIONARY 74 (2d ed. 1994).

¹⁰⁸ Japanese Patent No. 56-76591 (1981).

¹⁰⁹ *Id.* at 553, 31 USPQ2d at 1131.

¹¹⁰ *Id.*, 31 USPQ2d at 1132. The reasoning from *In re Nehrenberg*, 280 F.2d 161, 126 USPQ 383 (CCPA 1960), is relevant to the topic of this section although it did not mention the concept of teaching away *ipsisimilis verbis* and it is ambiguous whether the case involved a question of anticipation or obviousness. *Nehrenberg* involved the patenting of claims specifying a stainless steel that contained a minimum of 0.05% of carbon. A patent to Binder disclosed steels having the same elements as the appellant's in generally similar proportions. Because Binder was concerned with making steels of high toughness, however, he considered it desirable that the carbon content of his steels not exceed 0.035%. Binder had considered the use of the amount of carbon set forth in appellant's claims, but had regarded it as undesirable for his particular purpose of making a steel of high toughness. The CCPA opined, however, that the reference would have suggested to those of ordinary skill in the art that a carbon content of 0.05 per cent or more might be used in the steels which disclosed in Binder if extreme toughness were not desired and it was desired to avoid the additional expense of using oxygen for refinement. 280 F.2d at 192, 126 USPQ at 384-85. In other words, even though the reference indicated that the composition was unsatisfactory for the purpose intended by the reference it did not teach away from use of the composition for the appellant's purpose.

¹¹¹ 349 F.2d 433, 146 USPQ 479 (CCPA 1965).

esters¹¹² of acrylic acid. The claims specified *inter alia* the use of a catalyst complex that contained phosphorous.¹¹³

A secondary reference, Reppe IV,¹¹⁴ included the following excerpt.

[I]t is known that an attempt has already been made to increase the effect of nickel bromide by addition of a supplementary metal. . . . These attempts however have been abandoned in favor of the use of organic complex compounds of phosphorous, arsenic, or antimony with carbonyl-forming metals as catalysts.

It has now been found that the activity of halides of carbonyl-forming metals can be improved very effectively and the difficulties mentioned in connection with preparation of acrylic acid esters can be avoided *without the need to incorporate elements such as phosphorus*, . . .¹¹⁵

The appellant argued that Reppe accordingly taught away from the use of compounds containing the phosphorous atom. The CCPA was not persuaded. "Such a teaching of an alternative or equivalent method," stated the court, "does not teach away from the use of solvents with a phosphorous compound."¹¹⁶

¹¹² An ester is a compound resulting from the reaction of an alcohol with an acid. The reaction is accompanied by a yield of water along with the ester. VAN NOSTRAND'S SCIENTIFIC ENCYCLOPEDIA, *supra* note 25, at 978.

¹¹³ *Id.* at 438, 146 USPQ at 482-83.

¹¹⁴ German Patent No. 944,789 (June 21, 1956).

¹¹⁵ *Id.* at 437-38, 146 USPQ at 482 (emphasis added).

¹¹⁶ *Id.* at 438, 146 USPQ at 483. See also *In re Kleinman*, 484 F.2d 1389, 1391, 179 USPQ 244, 245 (rejecting appellant's argument that the prior art, which employed a spray atomizer to dispense a monomer, taught away from a claimed use of aerosol to dispense a monomer); *In re Beattie*, 974 F.2d 1309, 24 USPQ2d 1040 (Fed. Cir. 1992) (finding that a patent did not teach away when it "merely present[ed] an alternative to a well-entrenched musical theory, which, of course, he considers better and urges as a replacement" and further stated that "[t]he recommendation of a new musical notation system . . . does not require obliteration of another. . . ."). But see *Carrella v. Starlight Archery and Pro Line Co.*, 804 F.2d 135, 140, 231 USPQ 644, 647 (Fed. Cir. 1986), wherein the Federal Circuit opined that the use of one type of archery bow sight (viz., a "V" sight) taught away from the patentee's use of multiple sights, and Radio Steel & Mfg. Co. v. MTS Products, 731 F.2d 840, 856, 221 USPQ 657, 662 (Fed. Cir. 1984), wherein the court opined that the fact that the prior art uniformly taught that the juncture of wheelbarrow handles was behind the bowl of the wheelbarrow taught away from the applicant's juncture beneath the bowl. In each of these cases, the Federal Circuit seems to have found that merely teaching an alternative or equivalent way taught away. The opinions on teaching away in these cases, however, may be dicta as they were unnecessary to the ultimate conclusion of nonobviousness. In each case the Federal Circuit had found no suggestion in the prior art for the proposed combination or modification. In *Carrella*, moreover, the court found it significant that the "V" sight used "a completely different structure" from the inventor's sight. In *Radio Steel & Mfg.*, furthermore, the court had found the existence of "significant" secondary considerations indicating nonobviousness.

CONCLUSION

The concept of teaching away arises in both patent prosecution and litigation. This article sought to increase understanding of the concept in three parts. The first part defined the concept of teaching away as suggesting that the line of development flowing from a disclosure is unlikely to be productive of the result sought by an applicant. Upon reading such a reference, one of ordinary skill in the art would have been discouraged from following the path set out in the reference or would have been led in a direction divergent from the path taken by the applicant.

The second part explained that references can teach away expressly or impliedly. A reference teaches away expressly by disclosing that a claimed element should not or cannot be used. A reference teaches away impliedly when a modification or combination would render the invention disclosed therein significantly inoperable.

The third and last part distinguished related notions sometimes mistaken for teaching away, viz., teaching a wasteful way, not teaching a way, and teaching another way. Teaching a wasteful way refers to the fact that a modification or combination would have been expensive to make. Not teaching a way refers to the fact that a reference lacks a claimed feature. Teaching another way refers to the fact that a reference teaches a preferred, a better, or an alternative way to a claimed way of accomplishing something.

Letters to the Editor

Sir:

Thank you for publishing two provocative articles (G. Lloyd Knight, *It's Time to Stop Discriminating Against PCT/USA National Phase Patents*, JPTOS, June 1997, at 385 and Allen E. Hoover, *Further Comments on PCT/USA National Phase Applications & 102(e)*, JPTOS, Sept. 1997, at 643) on Section 102(e) dates of U.S. patents claiming priority to PCT applications. Both articles conclude that the effective Section 102(e) date of PCT "national stage" (371(c)) patents are the date the PCT application enters the U.S. national stage; this regardless of whether the PCT application is originally filed in the United States International Bureau or in the International Bureau of a foreign country. Both articles also conclude that the effective Section 102(e) dates of Section 111(a)-filed U.S. patents claiming Section 365(c) priority to a PCT application are the international filing dates of PCT applications; this again regardless of whether the PCT application was originally filed in the International Bureau of the United States or in that of a foreign country.

The articles' conclusions concerning "national stage" patents are well based. They analyze the PCT Treaty, particularly the U.S. reservation made under Article 64(a), the record of international negotiations leading up to the Treaty, and the plain words of 35 U.S.C. Sections 363 and 102(e). But their conclusions concerning the "effective" Section 102(e) dates of 365(c) "continuation" patents are suspect. The "only" legal support cited by either article for their conclusion in this regard is MPEP Section 1896. This section reads in its pertinent part,

Effective Date of a Reference. When a U.S. national application filed under 35 U.S.C. 111(a) becomes a U.S. patent, its effective date as a prior art reference against a U.S. patent is its effective filing date; see 35 U.S.C. 102(e). Thus if the 35 U.S.C. 111(a) application claims the benefit of a prior application, e.g., a co-pending PCT international application or a co-pending provisional application, its effective date as a reference will be the filing date of the prior application.

The MPEP cites no authority for this legal opinion other than an incomplete quote from Article 11(3) of the Treaty. This paragraph generally states, with a proviso, that a PCT filing shall have the same effect